



Measure Up

Assessment news for fourth-grade teachers

NAEP Results Show That...

Highlights of NAEP 2007

- Assessments will be conducted in grade 4 in reading and mathematics between January 22 and March 2, 2007.
- Results for fourth-graders nationwide will be reported in fall 2007.
- Teachers in sampled schools will answer questions about their background, training, and instructional practices.

90

The percent of fourth-graders who **talked about what they had read** at least once or twice a week

- ★ Fourth-grade students who had a **class discussion about something the class had read** at least once a week scored higher than students who had a class discussion once or twice a month.
- ★ Fourth-grade students who reported it was at least somewhat **important to do well on the NAEP mathematics test** scored higher than students who reported it was not very important.
- ★ Fourth-grade students who reported they **talked about their studies at home** at least two to three times a week had higher scores than students who talked about their studies once a week.
- ★ Fourth-grade students whose teachers had them **do hands-on science activities** almost every day scored higher than students whose teachers had them do hands-on science activities once or twice a week.
- ★ Fourth-grade students whose teachers **assessed student progress in reading using extended essays and papers** once or twice per month scored higher than students who were never or hardly ever assigned extended essays and papers.
- ★ Fourth-grade students whose teachers gave them **time to read books of their own choosing** almost every day scored higher than students who never or hardly ever were given time.
- ★ Fourth-grade students whose teachers had them **use a computer to play math games** once or twice a month scored higher than students who did so almost every day.

Using NAEP in Your Classroom



30

The percent of fourth-graders who **read more than 20 pages a day** in school and for homework

With the release of NAEP results, selected items from each assessment are also released. Teachers can access the items, answer keys and scoring guides, sample student responses and national performance results of fourth-grade students using the NAEP Questions Tool at <http://nationsreportcard.gov>. The Questions Tool includes both multiple-choice and short and extended constructed-response items for all NAEP subjects and grades. Below, read about using a reading sample question. In future issues, sample questions from other content areas will be explored.

In 2005, fourth-graders responded to questions about the story, “How the Brazilian Beetles Got Their Coats,” retold by Elsie Eells. After reading the story, students responded to three multiple-choice and six short-constructed-response questions. The context for this passage is reading for literary experience, which involves the reader in exploring themes, events, characters, settings, problems, and the language of literary works.

The NAEP reading framework guides the development of questions for the reading assessment. The framework is adopted by the National Assessment Governing Board (NAGB) and is available at www.nagb.org. The NAEP reading framework specifies that students are to respond to questions in a variety of contexts, such as reading for literary experience, reading for information, and reading to perform a task. For all constructed-response questions, students are asked to use information from the text to explain/support their answer.

In addition to contexts for reading, the framework also specifies aspects of reading that characterize the tasks readers are expected to complete for each question, such as forming a general understanding, developing interpretation, making reader/text connections, and examining content and structure.

For example, one question in the Brazilian Beetle passage asked students: “Do you think that the beetle is being sneaky by not telling the rat that she has wings? Use information from the story to explain why or why not.” Here, the reader must extend his/her initial impression to develop a more complete understanding of what he/she read, or “develop an interpretation.” The process often requires the student to link information across parts of a text. Questions that assess this aspect of reading may also require the student to draw

inferences about the relationship between two pieces of information or provide evidence to determine the reason for an action.

A student response rated acceptable for this question is: “No, maybe she wanted to teach the rat not to judge an animal by its looks.” A student response rated unacceptable is: “Yes, but she did the right thing.” Scorers commented that the first response supports an opinion with reference to the story’s theme. The scorers wrote that while the second response supports an opinion with a personal value judgment about beetle’s behavior, it does not contain support from the story. For this question, 26 percent of students in public and nonpublic schools gave an acceptable answer. Seventy-one percent of students gave an unacceptable answer.

Sample Grade 4 Reading Question

“What is one lesson that could be learned from reading this passage? Use information from the passage to support your answer.”

Teachers can use released fourth-grade items such as these in their classrooms. For example, a search of fourth-grade reading items also includes a series of questions titled “Space Pioneer.” For this text, there are 10 questions that ask students to respond to a biographical passage about an astronaut, Dr. Shannon Lucid. Teachers could assemble a document for their students that includes the test questions as they appeared in the original assessment. Once students answered the questions, they could score their responses using the scoring guide provided by NAEP. By using a set of released items in the classroom, teachers can see how their students compare to students nationwide. To access all released items, visit <http://nationsreportcard.gov> and select “Sample Questions.”

- To use released fourth-grade items in the classroom, teachers should visit <http://nationsreportcard.gov> and select “Sample Questions.”
- From there, teachers can select “Search Options,” and then a subject and grade 4. A series of questions will appear, and teachers can select to review the questions, sample student responses, and performance data for students nationwide.

Questions for Teachers, Principals, and Students

As a part of each NAEP assessment, fourth-grade teachers of sampled students are asked to fill out a questionnaire on a variety of topics. In 2005, this questionnaire asked teachers about their background, education, training, and instructional practices. Teachers were asked about their years of teaching experience, college major and minor courses of study, and professional

Sample Teacher Background Question

“As part of either your undergraduate or graduate coursework, how many mathematics education courses did you take?”

development activities. Additionally, there were subject-specific sections of the questionnaire, which focused on instructional practices, such as how many hours per week were spent teaching each subject, the availability and use of calculators in

mathematics class, and the organization of language arts class.

The information gathered from the Teacher Questionnaire is linked with the student scores and produces valuable contextual data available for analysis on the NAEP Data Explorer (<http://nces.ed.gov/nationsreportcard/nde/>). Using data collected from the Teacher Questionnaires, researchers can study the relationship between teacher experience and education, for instance, and student scores.

In addition to the Teacher Questionnaire, the school principal and students also answer background questions. The school principal provides information about student demographics, how students are grouped into classes, and professional development offerings. The students answer questions on a variety of topics, including their reading and writing practices, the subjects they study in school, and the effort they put forth on the assessment.



61

The percent of fourth-graders whose teachers assigned science projects that took a week or more

Grade 4 Science Performance Increases, Gaps Narrow

In 2005, a nationally representative sample of fourth-graders took the NAEP science assessment. The national results were released on May 24, 2006. Overall, the average fourth-grade science score was higher than in previous assessment years, with minorities and lower-income students making significant gains. From 2000 to 2005, Black and Hispanic students' science scores improved, and the gaps between White and Black and White and Hispanic students narrowed.

Interesting facts emerged from the background questionnaires that the sampled fourth-grade students and their teachers answered. NAEP results show an overall positive relationship between the amount of science instruction time and students' average science scores. Typically, the more time teachers reported spending on science instruction each week, the higher their students' average science score.

“The surface of the Moon is covered with craters. Most of these craters were formed by (a) eruptions of active volcanoes; (b) the impacts of many meteoroids; (c) shifting rock on the Moon's surface (“moonquakes”); (d) tidal forces caused by the Earth and Sun.”

As with all NAEP assessments, some of the test items and student performance on these items were released. Overall, 47 percent of fourth-graders selected the correct answer, (b), to the sample question above. To view complete results, all released items, scoring guides, and sample student responses to constructed-response questions, please visit <http://nationsreportcard.gov>.



Frequently Asked Questions About NAEP

Assessment Day Tips

- Encourage your students to do their best.
- Explain to your students that they are representing many other fourth-graders across the country.
- Emphasize to your students the importance of showing the country what fourth-grade students know and can do.

What is NAEP?

The National Assessment of Educational Progress, often called The Nation's Report Card, is the only measure of student achievement in the United States that you can use to compare the performance of students in your state with the performance of students across the nation or in other states.

Do the NAEP assessments replace the state assessments?

No. NAEP and state assessments measure different constructs but work together to provide information on student performance.

What are the goals of NAEP?

NAEP has two major goals: to compare student achievement in states and other jurisdictions and to track changes in achievement of

fourth-, eighth-, and twelfth-graders over time in mathematics, reading, writing, science, history, and other content domains.

What does NAEP assess and how is the content determined?

A subject-specific content framework, developed by the National Assessment Governing Board (NAGB), guides each assessment. The frameworks are available at www.nagb.org, and they include a range of subject-specific content and thinking skills needed by students to deal with the complex issues they encounter inside and outside their classrooms.

Can my school get school-level or individual student-level results?

No. The Nation's Report Card provides data for large groups of students. Typically, state, regional, and national

results are reported for grades 4 and 8. At grade 12, only national and regional results are reported.

Why should students participate in NAEP?

The participation of each student selected is important to the success of The Nation's Report Card because only a representative sample will allow the assessment to provide fair, accurate, and useful information on student achievement. Each student represents many other students in his or her state.

How can teachers prepare their students for NAEP?

Special preparation is not necessary or expected. You can encourage your students to come to school well-rested and to try their best on assessment day.

43

The percent of fourth-graders who read for fun on their own almost every day

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NAEP in the News

Recently, news media, research groups, and teacher advocacy organizations have focused on educational assessment and accountability.

Because NAEP is the only assessment that uses a nationally representative sample, many articles and research reports cite NAEP data. These articles and reports are varied in their perspective and focus. Some articles compare other assessment results to NAEP; others focus on the trend data that NAEP provides. Researchers are able to track student performance over time and across the country. The following columns contain a sampling of reports and articles which reference NAEP.

- The **New York Times** published "Young Students Post Solid Gains in Federal Tests" about the release of the NAEP Long-Term Trend reading and mathematics results.
- The **National Education Association** cited NAEP results as a confirmation of No Child Left Behind testing. This article offers key questions for teachers to consider when analyzing NAEP State results.
- The **Wall Street Journal** published a story, "How Charlotte Tops Big Cities in School Tests," with an analysis of the results from the NAEP 2005 Trial Urban District Assessment.
- The **Christian Science Monitor** published an article about the release of the NAEP 2005 Science results, "Elementary schoolers climb in science scores." The article documents that there was virtually no change among eighth-graders from previous scores in 1996 and 2000.

As educational accountability continues to dominate education news, one thing remains a constant: NAEP data will continue to be referenced in assessment articles.